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British Land Isopoda.—Second Supplement.

By Canon A. M. NORMAN and Professor G. S. BRADY.

FOR former notices on the Land Isopoda, see Ann. & Mag. Nat. Hist. ser. 7, vol. iii. 1899, p. 70, and vol. xi. 1903, p. 369.

Great success has attended Professor Brady's hunts for woodlice during the last few months in Westmorland and Durham. He has added two species to our fauna, and met with others previously known in our Islands only from a single far removed locality.

Haplophthalmus danicus, Budde-Lund.

This interesting species, recorded in 1899 as occurring in the garden of A. M. N. at Berkhampsted, Herts, has just been found by G. S. B. at Humbledon Hill, near Sunderland.

Haplophthalmus Mengei, Zaddach.

This was added to our fauna last year, having been found by A. M. N. in Co. Clare, Ireland. G. S. B. has this autumn added it to the English fauna from Fulwell Quarry, near Sunderland.

Trichoniscoides albidus (Budde-Lund).

1879. *Trichoniscus albidus*, Budde-Lund, "Prospectus gen. et spec. Crust. Isop. terrest.," Naturhist. Tidssk. ser. 3, vol. xii. p. 469.
1885. *Trichoniscus albidus*, Budde-Land, Crust. Isop. terrest. p. 248.
1898. *Trichoniscoides albidus*, G. O. Sars, Crust. of Norway, vol. ii. Isopoda, p. 165, pl. lxxiii. fig. 2.

A *Trichoniscus* taken by G. S. B. at Carley Hill Quarry, near Sunderland, has been compared with co-types of *Trichoniscus pygmæus*, G. O. Sars, and specimens of *Trichoniscoides albidus*, for which we are also indebted to our kind friend Professor Sars. In general appearance these two species seem to greatly resemble each other, but the Sunderland specimens agree with the latter in the shorter and wider form of the maxilliped, in the blunt stumpy spines of the last two joints of the peduncle of the antennæ, and in the more strongly tuberculated head and its lateral lobes and of the body-segments generally. On the other hand, the flagellum of the antennæ is three-jointed, and Sars represents it in this species as four-jointed, while that of *Trichoniscus pygmæus* is three-jointed. On turning,

however, to Budde-Lund we find the flagellum of his *Trichoniscus albidus* described as "*bi–triarticulatum.*" The species was previously known only in Norway and Denmark, and is an addition to our fauna.

Porcellio Rathkei, Brandt.

1833. *Porcellio Rathkei*, Brandt, Conspectus Monogr. Crust. Isop. terrest. p. 15.
1853. *Porcellio trivittatus*, Lereboullet, Mém. Crust. Fam. Cloportides, p. 54, pl. i. figs. 13, 14, pl. iii. figs. 66–70.
1885. *Porcellio Rathkei*, Budde-Lund, Crust. Isop. terrest. p. 85.
1898. *Porcellio Rathkei*, G. O. Sars, Crust. of Norway, vol. ii. Isopoda, p. 180, pl. lxxix. fig. 1.

A single adult specimen taken by G. S. B. at Humbledon Hill, near Sunderland; new to the British fauna. *P. Rathkei* has a range over the greater part of the northern portion of the Continent of Europe, and is known as far east as Transcaucasia. It has been found also in N. America, near New York and near Niagara.

Other synonyms of this species are *P. ferrugineus*, Brandt, *P. trilineatus*, *P. tetramœrus* and *striatus*, Schnitzer, *P. sylvestris*, Schöbl.

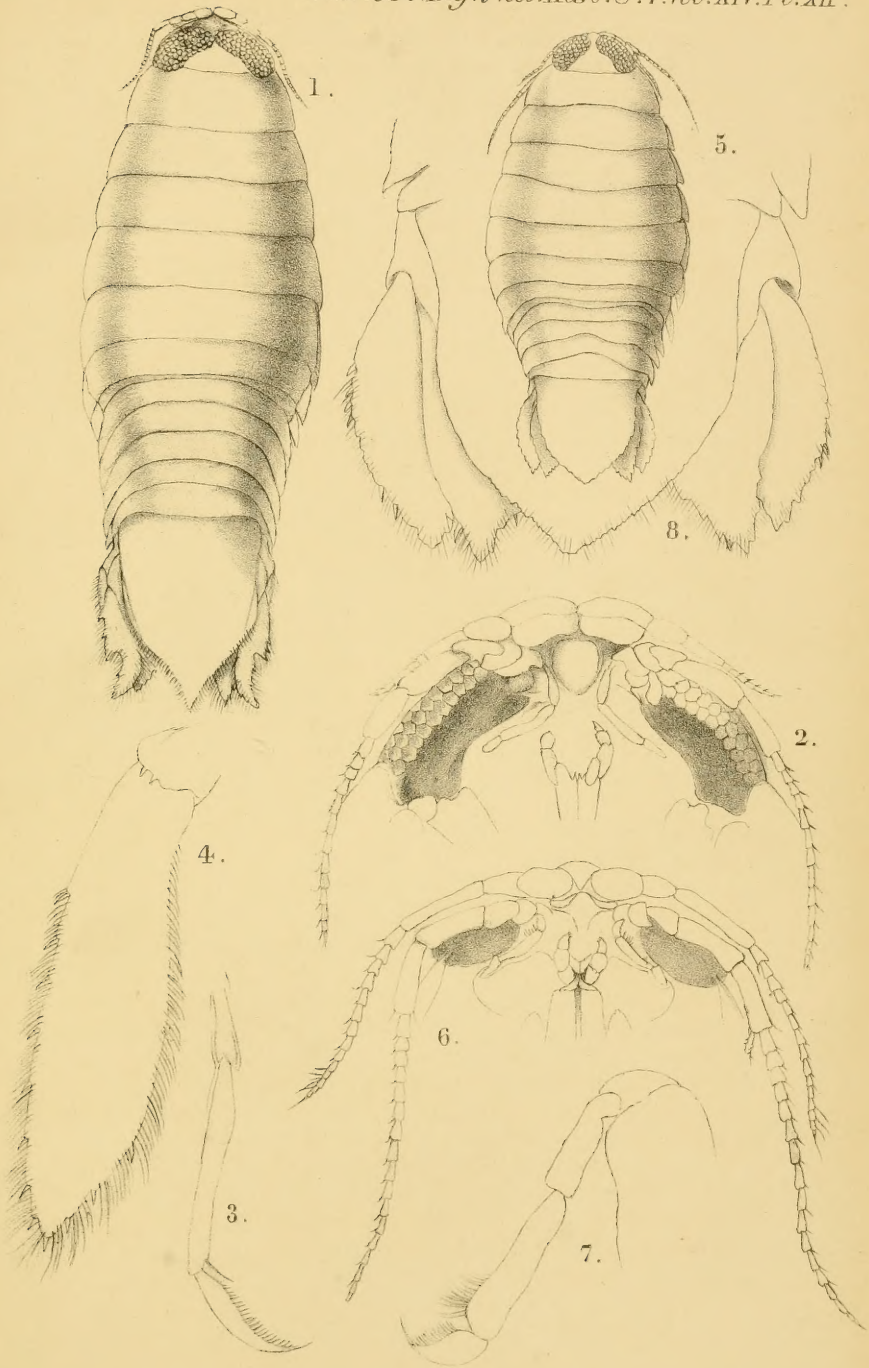
Armadillidium pulchellum (Zencker).

This *Armadillidium*, which was added to the British fauna by Dr. Scharff, who found it at Sligo, has this year been obtained by G. S. B. at Arnside, Westmorland.

In the paper referred to at the commencement of these notes as published in 1899, a list was given of all Land Isopoda found in the northern countries of Europe; the number occurring in each country was as follows:—Norway, 17; Sweden, 13; Denmark, 20; Holland, 11; Belgium, 17; British Isles, 20. This last number has now been raised to 25. The only species which are found in the other northern countries, but as yet are not known in ours, are *Trichoniscus pygmœus*, G. O. Sars (Norway); *Armadillidium pictum*, Brandt (Sweden, Norway, Denmark, and Belgium); *Armadillidium opacum*, Koch (Denmark); and *Armadillidium sulcatum*, M.-Edw. (Belgium).

Two of the British species, *Armadillidium nasutum*, Budde-Lund, and *A. depressum*, Brandt, have not yet been met with in any of the countries above mentioned.

From the species which have been found in the neighbourhood of Sunderland, as recorded in the foregoing notes, it would seem as if the Magnesian Limestone of the district was favourable to the life of Land Isopoda.



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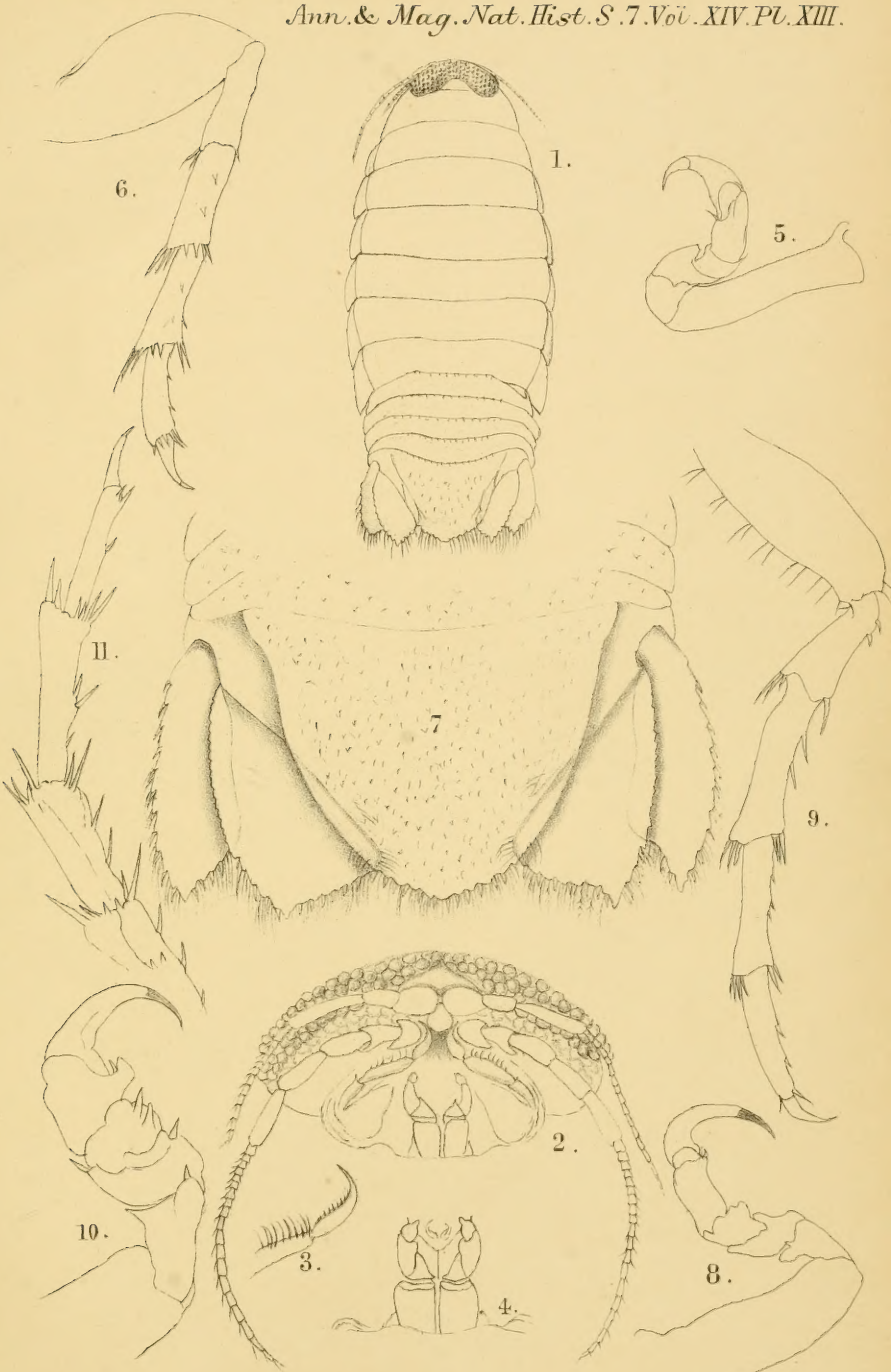

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